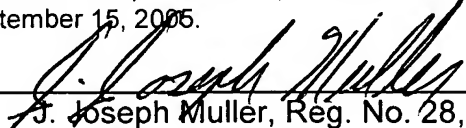


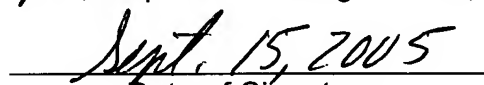
PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

**APPLICANT:** R. Weinstein  
**SERIAL NO.:** 10/082,682  
**FILED:** February 25, 2002  
**EXAMINER:** Erick Rekstad  
**DOCKET NO.:** SENT 9357US  
**GROUP ART UNIT:** 2613  
**FOR:** Method And System For Remote  
Wireless Video Surveillance

I hereby certify that this correspondence is being deposited with the U.S. Postal Service as first class mail in an envelope addressed to: Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on September 15, 2005.

  
J. Joseph Muller, Reg. No. 28, 450

  
Date of Signature

Mail Stop Amendment  
Commissioner of Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

September 15, 2005  
St. Louis, Missouri

**DECLARATION OF RANDOLPH A. JOHNSON UNDER 37 C.F.R 1.132**

The below-signed person, subject to penalties of perjury, does hereby declare and state as follows:

1. I was awarded a Bachelor of Science degree in physics from the California Polytechnic University, Pomona in 1983.

2. I have been actively involved in the relevant fields of proprietary security systems and sensor programs related research and development for twenty-two years. I have worked in these fields for Rockwell International and subsequently for the Boeing

Company which purchased the Defense/Proprietary Programs Divisions of Rockwell International in 1996.

3. In 2002, I was awarded the title of Associate Technical Fellow by the Boeing Company, and am considered one of Boeing's senior experts for Proprietary Security Systems, including both the design and development of sensor and communications components and systems.

4. Many of the products that I have developed during the course of my work in these fields are currently in use in covert operations outside of the Continental United States (CONUS). My expertise is sought after on a constant basis, by various internal Boeing program personnel for both "White" and "Black" programs.

5. I am currently leading a major Internal Research & Development (IRAD) effort associated with the development of security system components for Land Based Strategic Deterrent (LBSD) Missile Systems by the Boeing Company.

6. As part of this LBSD IRAD effort, both my lead technical team members, and I, conducted an extensive industry search of all current security system products available in the market.

7. Within this industry search, I identified a sub-set of critical video signal transmission performance parameters as meeting our LBSD requirements. Specific examples of these requirements include: encryption, decryption, data band widths, power requirements, antenna-type and size, frequency bands, and the ability to transmit this data without the use of a satellite uplink/downlink interface. In addition, I identified the ability to communicate and transmit data associated with multiple (excess of 50) cameras simultaneously of various types such as Pan-Tilt-Zoom (PTZ) and Fixed Focal

Length systems, operating in both the visible and thermal image wavelengths, as absolute requirements for such systems.

8. Based on the foregoing, I consider myself a person “skilled in the art” with respect to the technology described in the invention and claimed in U.S. Patent Publication No. US 2003/0163826 A1.

9. Upon the conclusion of our industry search, only one remote wireless video system transmission approach met our requirements. This is the system disclosed in U.S. Patent Publication US 2003/0163826 A1.

10. This system has very unique performance characteristics that are not present in any other system evaluated, and is deemed as a “one-of-a kind” product that no other product meets.

11. Examples of the performance parameters unique to the system identified in U.S. Patent Publication US 2003/0163826 A1 are:

- A. The ability to carry full frame-rate data from in excess of 50 covert camera systems of varying types (PTZ and Fixed) and wavelengths.
- B. The ultra low-power transmission output of the process video data stream that can be transmitted over long distances (in excess of 50 miles) at these ultra low power levels within several commercial frequencies. It should be noted that the ultra low power output transmission is a critical performance parameter for the anti-spoofing requirements of our LBSD program.
- C. The ability to transmit the video data stream over multiple commercial frequency bands (below 1 Gigahertz to approaching 6 Gigahertz). This capability significantly inhibits the ability of non-approved users to intercept and potentially “spoof” the video data transmission signal.
- D. The ability to store the full-rate video image data on separate media to provide the capability of either later playback or simultaneous playback of current and past video data from any/all camera systems.

- E. The ability to transmit the video data stream utilizing a small non-motorized drive antenna system.
- F. The ability to conduct all of the identified operations from either a fixed or mobile platform in real-time.

12. I am familiar with patents and the United States patent application process. I am co-inventor for U.S. Patent No. 5,063,680, which teaches a self erecting tiltmeter that is associated with a covert sensor system.

13. I have read and considered U.S. Patent Publication Nos. US 2003/0163826 A1 ("the present system") and US 2003/35386 A1 and U.S. Patent No. 6,698,021.

14. I have reviewed the Examiner's comments in the office action of June 16, 2005, regarding purported obviousness of Claims 1, 2, 3, 5, 7 and 8 by U.S Patent Publication No. 2003/0035386 ("the *Sullivan* reference").

15. I have read and considered the *Sullivan* reference.

16. I have reviewed the Examiner's comments in the office action of June 16, 2005, regarding purported obviousness of Claims 4, 6, 9 and 10 by U.S Patent Publication No. 2003/0035386 (*Sullivan* reference) in further view of U.S. patent 6,698,021 (Amini et al. ("the *Amini* reference")).

17. I have read and considered the *Amini* reference.

18. The *Sullivan* reference identifies the use of a unsecured public satellite communications link to relay video data from the "Live Event" (Item #102) via an Ethernet-supplied Uplink (Item #108), though the satellite and Associated Ground Receiving Station(s) and Routers (Items #110, #112 and #116 respectively) as the sole communication path. The use of the public satellite communications system allows

anyone within the public sector with the proper receiving equipment to receive and view this video data.

19. The present system uses a private secure and encrypted single and/or multipoint RF(Radio Frequency) wireless microwave communication system to send/receive the video data. This send/receive approach eliminates the potential for the video data being compromised, which can easily occur under the teachings of the *Sullivan* reference.

20. The *Sullivan* reference identifies the transporting and viewing of the video images over a public-accessible internet service. This approach utilizes non-secured, non-encrypted systems for the transmission and viewing of the video data.

21. The present system utilizes a private intranet system that consists of a secure and encrypted RF microwave video data signal that is unavailable to the general public. The AES encryption approach prohibits unauthorized users from viewing and altering the video data.

22. In reviewing the teachings of the *Sullivan* reference, it is apparent that the video data transmission system was developed for commercial applications. Specifically, those commercial applications are associated with the transmission of video feeds from such sporting events as professional and collegiate sports event, and for other commercial events such as award ceremonies, musical events, etc. The *Sullivan* reference's use of the term "Live Event" (Item #102) to describe the video data input source (standard-type video cameras) is commercial terminology that is not commonly utilized within the Defense Department arena. Combined with the physical use of the Video Production Switcher and Encoder hardware (Items # 104 & # 106

respectively), both widely used commercial-oriented products, the *Sullivan* reference is clearly presented as a commercially-oriented system designed to relay commercial-oriented video data to the general public. This is confirmed by the *Sullivan* reference's use of the Webcaster ISP system (Item # 116), another typical commercial-usage application.

23. The present system is not designed for video data transmission to the general public. The present system is uniquely specific to video transmission by small, highly sophisticated and unique, high-resolution video cameras covering several bandwidths (visible, infrared and color-palate infrared) that are of a covert nature, wherein the covert nature necessitates the security of these video signals to avoid their being compromised. The present system's approach of linking these specialized cameras to a video codec system and then maintaining the security of these video signals by encrypting them and sending them over the RF wireless microwave system ensures that these video signals will not be received and compromised by someone not authorized to view them.

24. The *Sullivan* reference teaches mass transportation of unsecured video data signals from commercial-type events over a satellite-based data transmission system for the final viewing by the general public of these video data transmissions. The type of video data transmission equipment used, the fact that these video signals are neither secured (use of public internet) nor encrypted validate this general public viewing.

25. The present system is unique and outside the teachings of the *Sullivan* reference as the present system uses an RF wireless microwave system to transmit

secure and encrypted data to either a single or multiple point location and subsequent distribution via a secure intranet. This is accomplished to support non-commercial usage applications, and the need to eliminate potential reception and/or compromise of specific covert camera operations utilized within the Department of Defense.

26. In reviewing the *Amini* reference, it is apparent that the *Amini* reference takes real-time video data signals from a Client's Site (Item # 310), and transmits them via a Private Network (Item # 340) to an Off-Site Storage Location (Item # 330) for future retrieval by a Viewing Site (Item 320) via a public network data transmission system. The *Amini* reference simply is "archiving" video data from security video cameras for clients to view in the future "as required". No accommodation is specified within the *Amini* reference that permits real-time viewing of any real-time events with parallel storage of the video data from these real-time events. Even if the video data just archived is immediately requested by a client, there is a time-delay penalty for the archiving and retrieval of this data that does not meet the definition of "real-time surveillance". The teachings of the *Amini* reference appears to be tailored for a typical commercial-type security camera system; i.e., for retail stores or equivalent to support loss prevention and/or prosecution of individuals caught performing illegal conduct on these commercial properties.

27. The present system is a true "real-time" video data viewing system that allows the end-user to conduct true real-time video surveillance of multiple security camera systems. This real-time video viewing capability is a critical requirement for specific monitoring by Department of Defense Security Systems to allow the proper threat identification and response in a required real-time environment.

28. As identified in the *Amini* reference, Items # 340 and # 350, the use of a Private Network (undefined as of type, so assumed standard phone-line based) and Public Network are identified as the modes of video data transmission to the data archiving and data viewing locations, respectively. The *Amini* reference does not provide any teaching or other indication that an RF wireless microwave transmission/reception approach is utilized, nor is there any reference or other indication that any specific secure network utilizing encryption algorithms is employed. As a result, the video data archived and retrieved for viewing is sent over public network communication systems, and is viewable by anyone in the public domain; whether by officially requesting this video data or by illegally obtaining access to the archived video data.

29. The present system utilizes a secure and encrypted RF wireless microwave system that is not part of a public network. This design approach precludes any parties that are not intended to receive this video data, which is not archived but provided in real-time, from accessing the video data.

30. As identified in the *Amini* reference, Item # 330, the Image Database (Item # 334) and Processor (Item # 332) are promoted as being located in a "fixed" site that has hard-wired connections for data archiving and retrieval between the Offsite Storage Site (Item # 330) and the Client Site (Item # 310) and Viewing Site (Item # 320) respectively. There is no identification for any mobile/portable system capability, nor is there any identification for any data transmission medium other than hard-wired land-lines associated with either the Private or Public Networks (Items # 340 and # 350 respectively).



31. The present system utilizes a wireless RF microwave system to transmit data from the security cameras to a wireless RF receiving system for the real-time viewing of this video data. In the present system, there are no hard-wire land-line limitations that are resident in the *Amini* reference. This allows both the surveillance cameras supplying the video signal outputs, the wireless RF transmitting and receiving system, and the viewing of these transmitted video signals to be in either a fixed or mobile platform.

32. With respect to Item # 310, "Client Site", and the associated subsystems; Item # 312, "Security Cameras" and Item # 314, "Camera Server", the sole function of this Client Site is to capture the video signals from the Security Cameras and subsequently send these captured video signals via the Private Network data link (Item # 340) for archiving at the Off Site Storage Site, Item # 330. There is no identification of any control functions associated with the Security Cameras, such as those controlling a "Pan, Tilt & Zoom" camera, or switching outputs for a infrared camera between "Black Hot" or "Black Cold" or "Color Palate" video data output functions. The *Amini* reference, therefore, teaches a "one way" system.

33. The present system, in addition to the real-time processing and data transmission of video data, supports the real-time control of security cameras. Examples of real-time control functions of the present system are the movement of the Pan and Tilt functions for a +/- 360 degree field of view in azimuth and +/- 90 degree field of view in elevation (i.e. four degrees of freedom); changing the lens "zoom" for target image recognition at varying distances and the selection of the type and color palate for infrared cameras.

34. The *Amini* reference is designed around a non-real-time video data archival system. The teachings of the *Amini* reference system can only receive video data outputs. As such, the *Amini* reference cannot perform the various internal control functions available on infrared Pan, Tilt & Zoom camera systems. These video data signals that are archived are viewed in non-real time by the end-user of the *Amini* reference, and are therefore not suitable for applications that require true real-time video viewing and continuous real-time control of the camera(s) providing the video data outputs. The *Amini* reference is hard wired using a land-line data transmission interface, with the off-site storage site being regulated to a fixed location.

35. The present system is a real-time video viewing system that can also command and control in real-time the internal control functions available on Infrared Pan, Tilt and Zoom camera systems. The present system usage of a wireless RF microwave system for both data transmission and receiving permits any and all of the present system's components (cameras, wireless RF microwave transmission, receiving systems, and viewing systems) to be either in fixed or mobile platforms.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both under §1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the instant application or any patent issued thereon.

Dated: 9-12-2005

  
Randolph A. Johnson